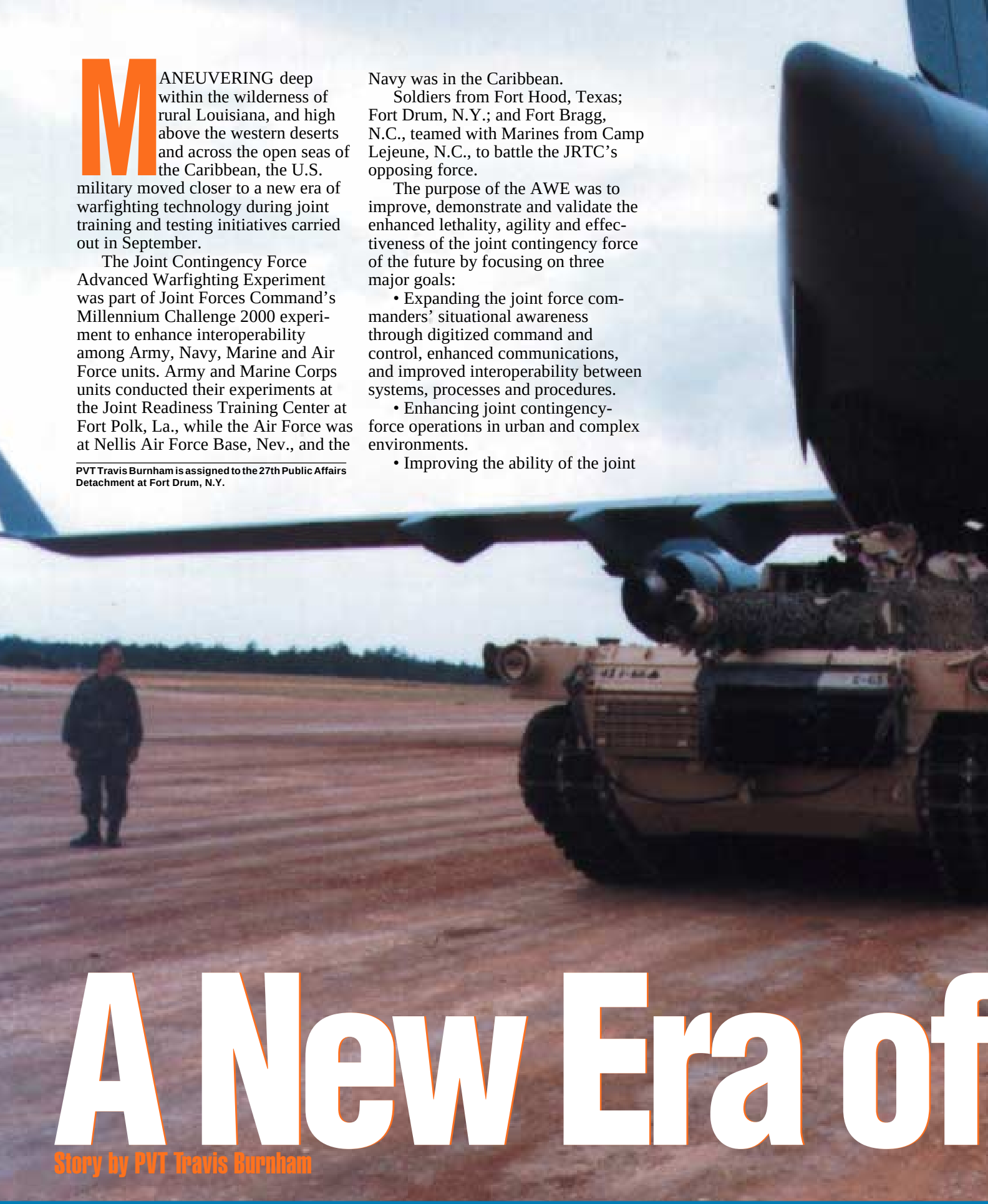
# Soldiers Online



# A New Era of

Story by PVT Travis Burnham

MANEUVERING deep within the wilderness of rural Louisiana, and high above the western deserts and across the open seas of the Caribbean, the U.S. military moved closer to a new era of warfighting technology during joint training and testing initiatives carried out in September.

The Joint Contingency Force Advanced Warfighting Experiment was part of Joint Forces Command's Millennium Challenge 2000 experiment to enhance interoperability among Army, Navy, Marine and Air Force units. Army and Marine Corps units conducted their experiments at the Joint Readiness Training Center at Fort Polk, La., while the Air Force was at Nellis Air Force Base, Nev., and the Navy was in the Caribbean.

Soldiers from Fort Hood, Texas; Fort Drum, N.Y.; and Fort Bragg, N.C., teamed with Marines from Camp Lejeune, N.C., to battle the JRTC's opposing force.

The purpose of the AWE was to improve, demonstrate and validate the enhanced lethality, agility and effectiveness of the joint contingency force of the future by focusing on three major goals:

- Expanding the joint force commanders' situational awareness through digitized command and control, enhanced communications, and improved interoperability between systems, processes and procedures.
- Enhancing joint contingency-force operations in urban and complex environments.
- Improving the ability of the joint

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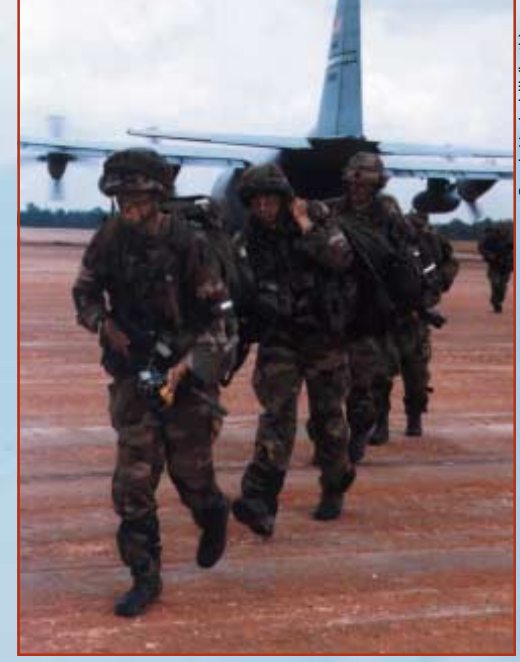
contingency force to plan and conduct forced- and early-entry operations.

The Army met its goal by integrating dozens of new technological initiatives, such as digitized communication systems, unmanned aerial vehicles and thermal-sighted weapons, said LTG Randall L. Rigby, experiment director and deputy commanding general for futures at U.S. Army Training and Doctrine Command.

"From both the training and experimental perspectives, this has been an unqualified success," Rigby said.

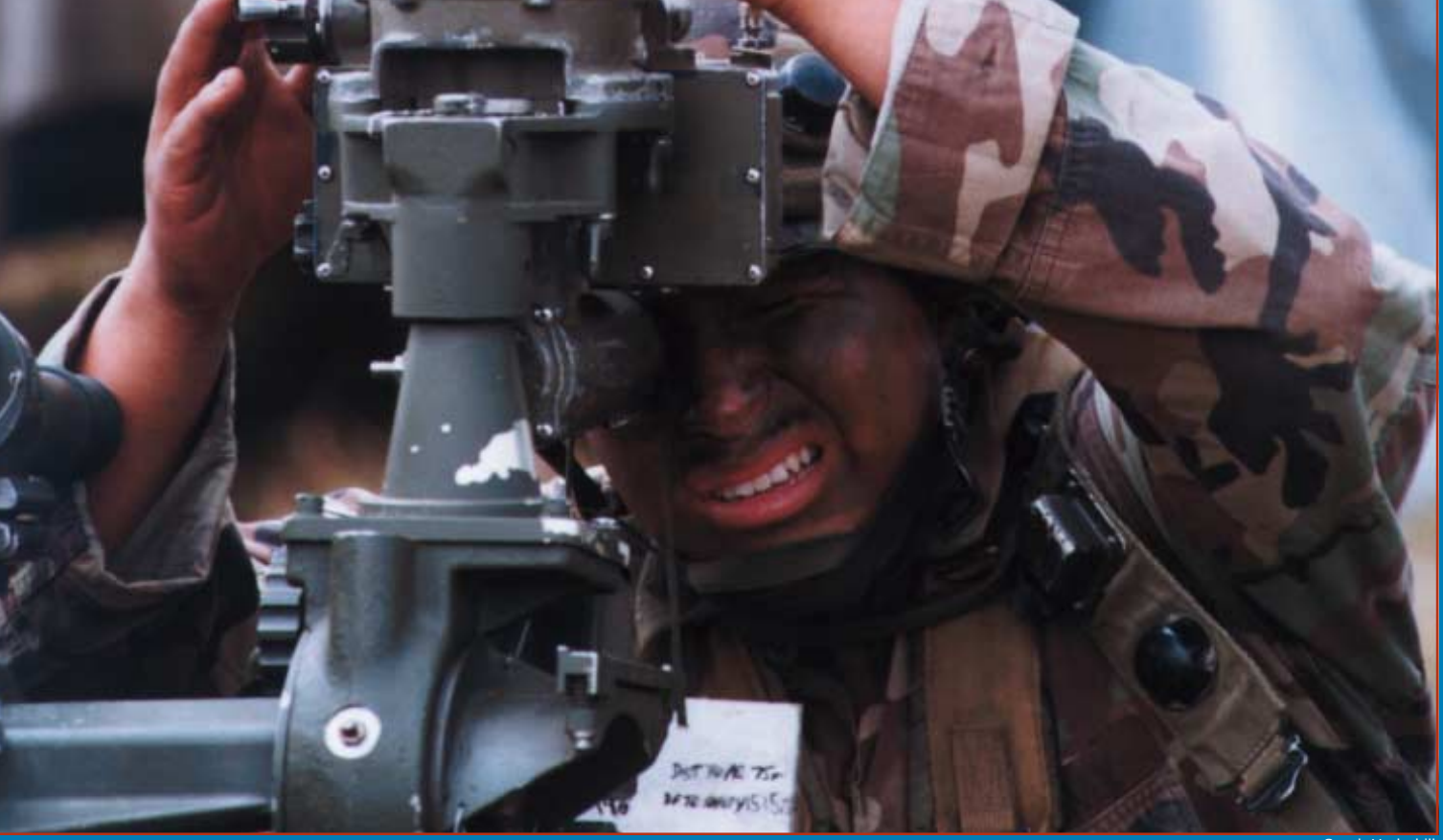
"All who participated came here very well trained, with the very latest in technology, and demonstrated the potential this technology has on the future battlefield," he said. "We have also shown that we can extend net-



Sarah Underhill (both)

**An M1 tank is unloaded from a C-17 (main photo) and infantrymen disembark from a C-130 as the AWE moves ahead.**

# Warfighting



An artilleryman looks through the sight of his M-102 howitzer before an AWE fire mission.

Sarah Underhill

work-centric warfare down to the individual soldier through the Land Warrior system, and demonstrated that we can put a local area network in the air and collaborate at great distances. We also demonstrated the Army is a very strong partner in joint warfare."

Soldiers tested new initiatives like the Slew-to-Cue, a radar system that tracks incoming aircraft.

"In the past, it was one guy looking, hearing, watching," said OPFOR commander LTC Jeff Jarkowsky. "Now he is tracking aircraft on a screen and knows its exact location and the direction it's heading."

He said soldiers had greater situational awareness and a better picture of what their unit's capabilities were, including positions of forces and weapon systems.

"I suspect that this was the result of the additional assets that they tested and their ability to share that information top-down and bottom-up," Jarkowsky said.

SPC William A. Graves

Marine Pfc. Jose L. Vizcarrondo of Company K, 3rd Battalion, 6th Marines, uses an AN/PAS-13 thermal sight to scan the AWE "battlefield" while pulling security.

COL Bryan Stephens, commander of Fort Drum's 1st Brigade, 10th Mountain Division, agreed.

"The technology here has given us greater situational awareness — much more than we have ever had in the past," he said.

Stephens stressed the importance of communications on the battlefield.

"You will never be able to eliminate the fog of war. There is always going to be confusion, and there will always be uncertainty on the battlefield," he said. "With this new equipment, as a commander I am able to

track my subordinate units and communicate with them in ways that I was never able to before."

He said the new technology greatly enhances his unit's ability to execute missions.

SGT Aaron Volkert from Fort Hood's 2nd Battalion, 22nd Infantry Regiment, also appreciated the fact that commanders at higher levels seemed more situationally aware.

"That allows commanders to be more flexible, and as they say in the Army, 'things roll down hill,' so it made things easier for the lower echelons," he said. "Soldiers are really impressed. They love it."

The tactical and technical training soldiers received also made them more alert and eager, Volkert said.

"With these new initiatives, such as the thermal-sighted weapons and the enhanced night-vision goggles, we own the night," he said. "These AWE

*(Continued on page 8.)*

Sarah Underhill

**Soldiers of the 10th Mountain Division scan their surroundings before moving to another position during the MOUT Advanced Concept Technology Demonstration.**

# Battling for the City

**Story by PVT James Strine**

THE use of technology to win the fight on urban terrain paid off in a big way at the Joint Contingency Force Advanced Warfighting Experiment at Fort Polk officials said.

Soldiers from the 10th Mountain Division at Fort Drum and marines from Camp Lejeune employed approximately 25 initiatives during the culminating MOUT Advanced Concept Technology Demonstration.

The overnight demonstration at the simulated war-torn town of Shughart-Gordon employed a force-on-force exercise between Fort Polk's opposing force and Army and Marine elements that formed the U.S. "Blue Force."

The exercise capped an initiative started in 1997 built on lessons learned during the U.S. military's urban warfighting experiences in places such as Grenada, Panama, Somalia and Haiti, said JRTC's MAJ Joseph G. Krebs Jr., MOUT officer in charge.

**PVT James Strine is assigned to the 27th Public Affairs Detachment at Fort Drum, N.Y.**

Jim Caldwell

**A soldier models the new helmet, which includes a digital radio headset and microphone. The eyepiece provides the wearer with video, thermal images and graphics.**

"It's predicted that 50 percent of today's combat occurs in urban areas," Krebs said. "By the year 2025, it will be approximately 75 percent."

Urban combat is particularly dangerous to the attacking force, Krebs said. History has shown that a hometown advantage is enough to complicate communication and restrict lines of sight, and the presence of noncombatants can restrict lethal firepower, he said. The MOUT exercise was a direct response to those circumstances and was intended to solve them with training on tactics, techniques and procedures.

The soldiers and marines participating in the MOUT demonstration said they considered it a success. They had road-marched as far as 14 miles to "liberate" the $48 million MOUT facility before waging a fierce battle that lasted more than seven hours. Soldiers from 1st Battalion, 87th Infantry Regiment, initiated the "attack" when they breached the city.

initiatives help us shoot, see and acquire targets better than ever before. The more night training we get, the better we get."

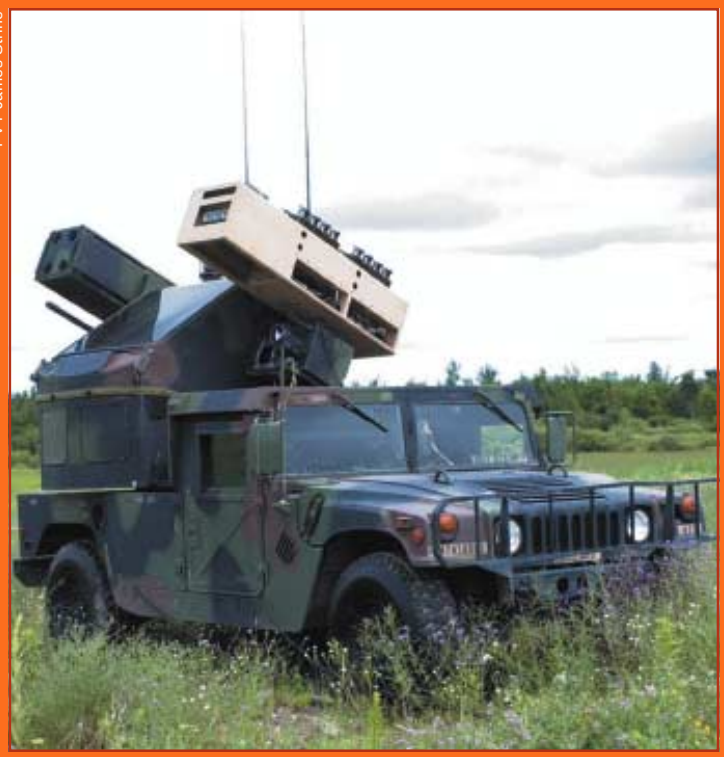
Other soldiers in the field echoed statements made by those planning and conducting the AWE.

"These concepts are perfect, even though not all of the equipment is there yet," said PFC Matthew Henry, also of 2nd Bn. "And that is the reason we are here: to test and improve."

"Compare these initiatives to what they will be like eight to 10 years from now — what a difference it will be," said SPC James Rathmann, another 2nd Bn. soldier. He said the new gear will change how battles are won, and help save lives in the process.

"I feel privileged and proud to be testing this state-of-the-art equipment," Rathmann said. "And it feels good to help out with the future because, even when I've completed my service, I will always have that connection with the Army: that I helped mold the future of the infantry." □

PVT James Strine



**Equipped with MILES gear, this Avenger fire unit was ready to engage "hostile" aircraft during the AWE.**

Three hours into the "battle," heavy forces from the 3rd Squadron, 17th Cavalry Regt., were called into the town to bring additional pressure on the OPFOR.

"They had a successful attack," Krebs said. "As they moved through the town, they had infantry securing the tanks, and the tanks provided the firepower forward to get the infantry into the buildings. And that's what we try to teach out here. They have to fight with combined arms to be survivable and lethal."

The Blue Force faced 78 OPFOR soldiers at Shughart-Gordon and 23 personnel portraying noncombatants.

Orlando Vega, who played a noncombatant, said the forces appeared evenly matched. He said the tanks appeared to give the Blue Force its edge, and the OPFOR fought well because of its hometown advantage.

Lance Cpl. Jason Sperry of Company K, 3rd Bn., 6th Marines, admitted the OPFOR was a formidable opponent, as it knew the town well enough to develop effective traps and surprises. But soldiers and marines met the challenge.

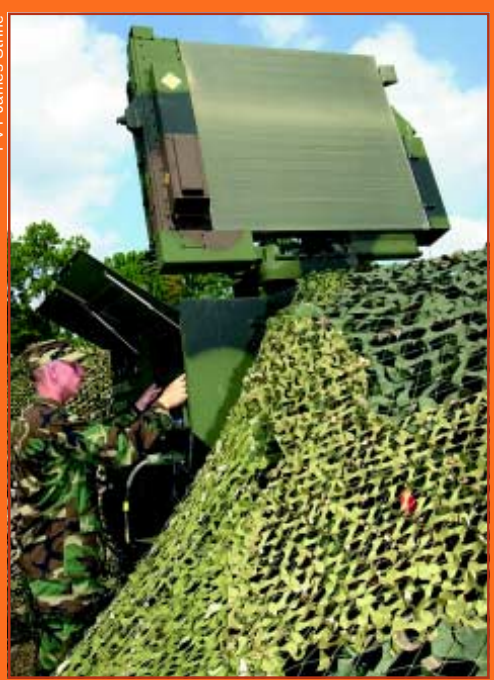
"I think we did a truly outstanding job, considering we had been training for this for a year at Fort Benning and Fort Drum," said SGT Montie Long of 2nd Bn., 22nd Inf. "I think we really had the upper hand on the OPFOR this time."

Long said the new MOUT technologies Blue Force employed for the demonstration gave it the advantage.

Since experimentation began in January 1998, the Army and Marines have tested approximately 128 technologies, and trimmed the list of initiatives to about 25.

The development process was often guided by comments from those who will use the equipment in combat, and the initiatives filled the design criteria for some 32 targeted areas of improve-

PVT James Strine

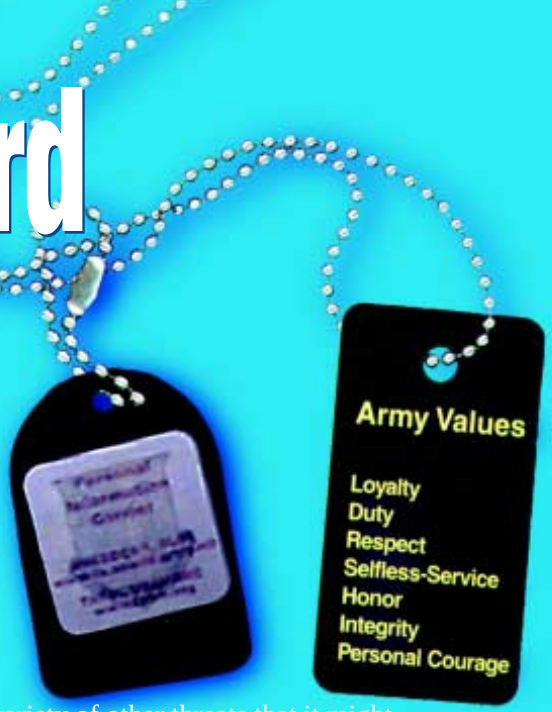


**SPC Jason T. McCormick of HHC, 3rd Bn., 62nd ADA, demonstrates the Sentinel radar. It can detect aircraft up to 40 kilometers away.**

PVT James Strine

# Dog Tag Health Card

By Pvt. Travis Burnham




THERE'S nothing particularly flashy about this device. And, unlike many other ultramodern initiatives in the limelight at the Joint Contingency Force Advanced Warfighting Experiment, the "Personal Information Carrier," or PIC, won't help defeat an adversary.

But this small computer chip shows great potential for helping troops in the field if they are injured.

Not much larger than a thumbnail, the PIC can store a soldier's entire medical history and can be worn around the neck along with personal identification tags. The innovative device enables medical personnel to access and update soldiers' medical records almost anywhere.

"The number-one advantage to the PIC is that we have data on the soldier while out in the field," said MAJ Cathy Beck of the U.S. Army Medical Research Command. "We learned how valuable it is to have that information when we didn't have it during Operation Desert Storm," she said.

When medical personnel plug the PIC into a portable computer, a photo of the soldier appears on the screen along with the soldier's background information. With a few key strokes or clicks of a button, medics can review a soldier's entire medical history, including X-rays, EKGs and even ultrasounds. The medic can record additional information to the soldier's PIC by using voice, handwriting or typing.

The eight-megabyte chip can easily store enough information to fill a phone book, said MSG John Lisenbee, Battle Lab Support Element NCO.

Before soldiers could test the PIC card during JCF-AWE, it had to endure a barrage of other tests. The plastic card, weighing only a few grams, was tortured by scalding temperatures, freezing rain, driving wind, blowing dust, caustic solvents, cleaning fluids, insecticides and a variety of other threats that it might encounter.

After testing the PIC card to extremes, developers declared it ready to be tried by yet another extreme: the U.S. Marine Corps.

Camp Lejeune's 2nd Marine Expeditionary Force put several designs of the card on trial during a one-week field exercise. Individual marines consistently chose one design as more comfortable than the others because of its light weight and smooth edges.

If for some reason the PIC card is damaged or lost in the field, making another copy won't be a problem, Beck said.

"Each unit will batch its databases together, so soldiers' medical information will be stored in a larger system as well as the PIC card. If a soldier reports his card damaged or missing, it would only take a few seconds to make another." □

**Contractor personnel prepare the Hunter unmanned aerial vehicle for its next reconnaissance mission during the AWE.**

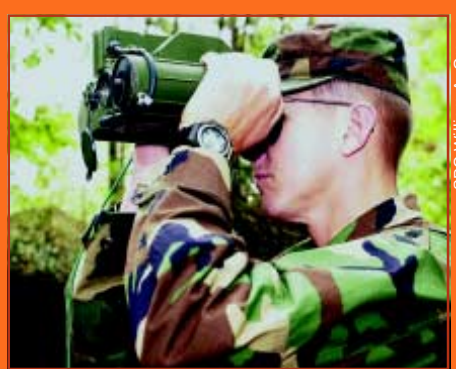
ment, Krebs said. Personal protection powered most important initiatives on the list.

"How well these initiatives performed here will determine whether or not they will be fielded in full for the military," Krebs said.

"This is put-up time right now. This is what all the officials have their eyes on."

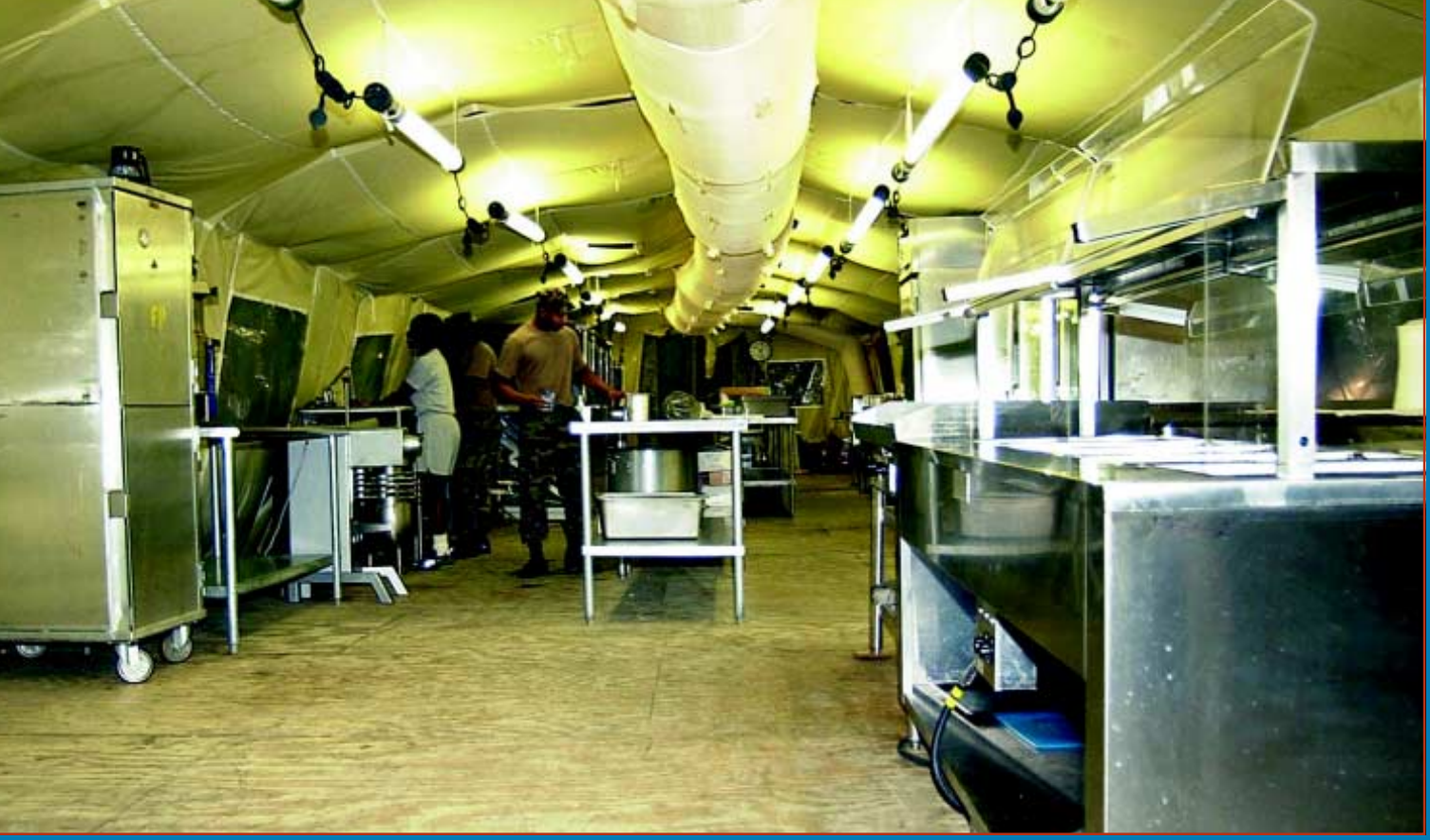
A few of the high-profile initiatives were the Pointer unmanned aerial vehicle; a full-size ladder that collapses to dimensions small enough to fit in a rucksack; and breaching tools such as explosive cutting tape for blowing holes through brick walls. Rifle-launched entry munitions, known as RLEM, were used to take down doors, as were simple hand-held tools that are lighter than the traditional sledge-hammer and crowbar combination.

After studying the performance of each initiative tested, officials will begin selecting those pieces of equipment that save lives and increase combat effectiveness. □



SPC William A. Graves

**SFC Eric M. Nielson demonstrates the MELIOS digital laser rangefinder, which can be connected to the Handheld Computer Terminal.**



**Force Provider's kitchen *(above)* and the new containerized kitchen will ensure soldiers get quality meals in the field.**

# Haute Cuisine

By PVT James Strine

"EASY like sliced bread and smooth like gravy."

That's how 10th Forward Support Battalion food service worker SPC Vernon Bell described the new containerized kitchen his unit tested during the JCF-AWE at Fort Polk.

According to Bell and his fellow soldiers, the new CK is "more than a vast improvement" on previous methods of food service that date back to the 1960s. And they consider themselves very fortunate to work with the new kitchen, which can serve twice as many soldiers as the old one.

"I really love it. It has brought cooking standards up to the levels they should be," Bell said. "It lets the cooks keep hot food hot, and cold food cold. And we're more mobile now than ever."

The CK can serve food to up to 650 soldiers three times a day through the technology of an expandable working space that tops the previous mobile kitchen's by 200 percent. The CK is powered by a quiet tactical generator and has an improved burner unit, refrigeration that was nonexistent on older units and a powerful air conditioner to keep soldiers comfortable while cooking in extreme heat.

All these features collapse into an 8x8x20-ft. trailer that is transportable by air or tactical trucks, making the CK mobile enough to deploy worldwide, a key objective of the JCF-AWE effort.

"I haven't had any problems with the tactical, deploying aspects of the CK," said SSG Brian Whitmey, 10th FSB senior food-operations sergeant. "It was tested and beat around for thousands of miles at Aberdeen

**The containerized kitchen can serve food to up to 650 soldiers three times a day through the technology of an expandable working space that tops the previous mobile kitchen's by 200 percent.**

Proving Ground in Maryland, and everything came through in great condition."

Many of the CK's convenience and quality features also add up to a tactical asset — battlefield security. Its increased feeding capacity means that soldiers are served faster and can quickly return to their missions, while a quieter power source, indoor cooking and black-lighting for nighttime operations all help to protect the facility from enemy detection.

"I'm not putting off a sign that can compromise our position, and that is obviously for the good of my soldiers," said Whitmey.

Soldiers of the 10th FSB said they would like to see the new CK in service Armywide. After working with all the new features in the field, they said it will be hard to go back to the old-style mobile kitchens. □

**"It lets the cooks keep hot food hot, and cold food cold. And we're more mobile now than ever."**

# Living the City Life

By SPC William A. Graves

"CITY" life in a field environment can't be beat, according to soldiers who participated in the JCF-AWE.

Climate-controlled living quarters, a weight room and chapel, even a combination television/game room — it's all part of the "Force Provider" tent city operated by DynCorp.

"The Force Provider mission is to improve soldiers' quality of life during their JRTC rotations," said Jack P. Hardwick, site manager at Fort Polk's Thomas Sullivan Testing and Training Center. The tent complex also provides a glimpse of possible living conditions during future deployments.

Also offering a high-quality dining facility and user-friendly hygiene services, the tent city can support more than 550 soldiers, Hardwick said.

Force Provider comes complete with "Tent Extendible Modular Personnel" units that have heating and air conditioning. The chapel, weight room, television and game room, and electric-powered dining facility are also climate-controlled. There are also flush toilets and individual showers.

Furthermore, the complex has its own water and fuel storage, power generation and distribution, and waste water collection systems.

CPT Raymond A. Hrinko of Headquarters Company, 710th Main Support Battalion, said Force Provider is a great opportunity for soldiers to recuperate from the field's rigors. It is very conducive to planning and getting soldiers ready for battle, he said.

He added that the facilities are more than adequate to run a tactical operations center in the JCF-AWE setting.

"With the air conditioning and heating units, it provides the optimum environment for the computers, and for us, to weather any situation," Hrinko said. "It provides a great place to track the battle."

Like the JCF-AWE, the Force Provider is another indication of the direction the Army is headed, said MSG Dennis D. Heyen, operations sergeant, 216th Quartermaster Co.

"Care of the soldier is very high on the list of priorities," Heyen said. "Force Provider is one of those concepts where we're providing creature comforts for soldiers." □

SPC William A. Graves is assigned to the 27th Public Affairs Detachment at Fort Drum, N.Y.


SPC William A. Graves

**SSG Jon A. Almlic of the 216th QM Co. works at the Force Provider laundry facility. The complex also has its own water and fuel storage.**